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AMENDMENT TO SPECIFICATION

Page 1, line 1, change the title to read as follows.

~~Circuit arrangement~~ Ballast for High Pressure Discharge Lamp

Page 3, line 4, replace the paragraph beginning with "In Fig. 1" with the following paragraph.

In Fig. 1, K1 and K2 are input terminals for connection to the poles of a supply voltage source. In put terminals K1 and K2 are connected by means of a series arrangement of inductor L1 and switching element S1. The inductor L1 forms an inductive element L1. A common terminal of inductor L1 and switching element S1 is connected to an anode of diode D1. Diode D1 forms a unidirectional element D1. Terminal K3 is connected to a cathode of diode D1. Terminal K4 is connected to input terminal K2 via ohmic resistor R. A control electrode of switching element S1 is connected to an output terminal of circuit part I. Circuit part I is a first control circuit for generating a control signal for rendering the switching element S1 alternately conductive and non-conductive. An input terminal of circuit part I is connected to an output terminal of circuit part II. Circuit part II is a second control circuit for controlling the level of an output voltage that is present between the output terminals. An output terminal of circuit part II is connected to an input terminal of circuit part I. Circuit part II comprises a circuit part [[~~SSC~~]] Scc and a circuit part III. Circuit part [[~~SSC~~]] Scc is a state control circuit for changing the level at which the output voltage is controlled from a first level associated with the starting of the high pressure discharge lamp to a second level associated with the stationary operation of the high pressure discharge lamp. Circuit part III forms a third control circuit for controlling the second level of the output voltage in dependency of the width of a ~~reignition~~ re-ignition voltage peak present between the lamp terminals when the DC-AC-converter changes the polarity of the lamp voltage. An input terminal of circuit part II is connected to the cathode of diode D1. Circuit parts I and II, inductor L1, switching element S1, diode D1 and terminals K3 and K4 together form a DC-DC-converter of the type up or boost converter. K3 and K4 form the output terminals of the

DC-DC-converter. Terminals K3 and K4 are connected by means of a series arrangement of switching elements S2 and S3 and by means of a series arrangement of capacitors C1 and C2. Switching element S2 is shunted by diode D2 and switching element S3 is shunted by diode D3. Respective control electrodes of switching elements S2 and S3 are connected to respective output terminals of a circuit part CC for generating control signals to render switching elements S2 and S3 alternately conductive and non-conductive. A common terminal of switching elements S2 and S3 is connected to a common terminal of capacitors C1 and C2 by means of a series arrangement of an inductor L2, terminal K5, high pressure discharge lamp LA and terminal K6. Terminals K5 and K6 are terminals for lamp connection and are connected by a capacitor C3 that shunts the high pressure discharge lamp LA. Circuit part CC, switching elements S2 and S3, capacitors C1, C2 and C3, inductor L2 and lamp connection terminals K5 and K6 together form a DC-AC-converter for generating an AC lamp current out of the output voltage. This DC-AC-converter is a bridge circuit. Input terminal K2 is connected to a first input terminal of circuit part PSG. A second input terminal of circuit part PSG is connected to terminal K3. Ohmic resistor R and circuit part PSG together form means for generating a power signal that represents the power supplied to the high pressure discharge lamp and for activating the state control circuit SCC. An output terminal of circuit part PSG is connected with an input terminal of circuit part DT. Circuit part DT is a delay circuit for timing a predetermined delay time interval after the power signal has increased above the predetermined reference value and for activating the state control circuit [[~~SSC~~]] Scc after said predetermined delay time interval has timed out. An output terminal of circuit part DT is connected to an input terminal of state control circuit [[~~SSC~~]] Scc. Circuit part III is coupled to lamp connection terminals K5 and K6. In Fig. 1 this coupling is represented by means of a dotted line.

Page 4, line 15, replace the paragraph beginning with "When the input terminals" with the following paragraph.

When the input terminals K1 and K2 are connected to the poles of a (DC) supply voltage source, a DC supply voltage is present between the input terminals K1 and K2.

Circuit part I generates a control signal that renders switching element S1 alternately conductive and non-conductive. As a result the DC supply voltage is converted by the DC-DC-converter into an output voltage that is a DC-voltage with an amplitude that is higher than the amplitude of the DC supply voltage. This output voltage is present between the terminals K3 and K4 and (immediately after ignition) is controlled at a first level that is relatively high by the circuit part II. The circuit part CC generates control signals that alternately render switching elements S2 and S3 conductive and non-conductive. More in particular the switches S2 and S3 are controlled in a way that is known in the art as the half bridge commutating forward mode. In the first half a period of this mode the first switch is non-conductive, while the second switch is rendered alternately conductive and non-conductive at a high frequency. In the second half period of this mode the first switch is rendered alternately conductive and non-conductive at a high frequency, while the second switch is non-conductive. As a result the current through the lamp is a low frequency substantially square wave shaped AC current. In a first approximation the power consumed by the lamp is equal to the power consumed by the DC-AC-converter. This latter power is the product of the current consumed by the DC-AC-converter multiplied by the voltage present between terminals K3 and K4. Circuit part PSG generates a power signal that represents this power, by multiplying the voltage over ohmic resistor R (representing the current consumed by the DC-AC-converter) with the amplitude of the voltage between terminals K3 and K4. The power signal is compared with a predetermined reference value by means of a comparator comprised in circuit part PSG. Immediately after the high pressure discharge lamp has been ignited in a way that is well known in the art the discharge in the lamp is not yet stable and the power consumed by the lamp is relatively low. As a consequence the power signal is lower than the predetermined reference value and the output of the comparator that is connected to the output of circuit part PSG is low. After some time the plasma in the high pressure discharge lamp LA stabilizes and the amount of power consumed by the lamp increases. The power signal increases as well and when the power signal has increased above the predetermined reference value, the voltage at the output terminal of circuit part PSG changes from low to high. This change activates a timer that is comprised in circuit part DT. The timer times out a predetermined delay

time interval. When this predetermined delay time interval has been timed out, the output terminal of circuit part DT changes from low to high and the state control circuit [[~~SSC~~]] Scc is activated. The state control circuit [[~~SSC~~]] Scc changes the level at which the output voltage is controlled from a first level associated with the starting of the high pressure discharge lamp to a second level of associated with the stationary operation of the high pressure discharge lamp. This second level is lower than the first level. As a result the power dissipation in the DC-AC-converter is decreased. During stationary operation the circuit part III monitors the width of the ~~reignition~~ re-ignition voltage peak that is present between the lamp terminals when the DC-AC-converter changes the polarity of the lamp voltage. Circuit part III comprises a comparator coupled to a timer. The comparator compares the voltage over the lamp with a reference value. The reference value is chosen between the lamp voltage when the lamp is conducting the lamp current and the highest value of the lamp voltage during ~~reignition~~ re-ignition. When the voltage over the lamp is higher than the reference value, the comparator activates the timer and when the voltage over the lamp is lower than the reference value the comparator stops the timer. The timer thus times the time interval during which the voltage over the lamp is higher than the reference value. This measured time interval is compared with a reference by means of a further comparator. When the measured time interval is higher than the reference, this means that the ~~reignition~~ re-ignition is too slow and the circuit part II increases the level at which the output voltage present between terminals K3 and K4 is controlled. When the measured time interval is lower than the reference, this means that the ~~reignition~~ re-ignition is taking place faster than necessary to prevent a rapid decrease in lamp performance while the power dissipation in the circuit arrangement is relatively high. To lower this power dissipation the circuit part II decreases the level at which the output voltage is controlled. Thus the circuit part II realizes that the level of the output voltage is controlled such that power dissipation is relatively low while the ~~reignition~~ re-ignition of the lamp is taking place fast enough to prevent a rapid decrease in lamp performance.